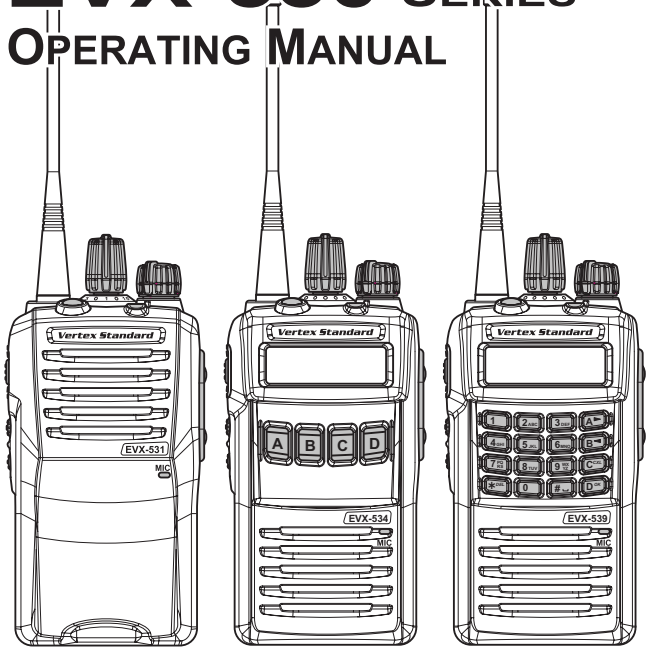
Vertex Standard

EVX-530 SERIES

OPERATING MANUAL



EVX-531 EVX-534 EVX-539

PROGRAMMABLE FUNCTIONS/FEATURES

- IP57 Submersible (1 m/30 min.)
- Available Programmable Function Keys
- 2-Tone Encode/Decode※1
- 5-Tone Encode/Decode※1
- MDC-1200® Encode/Decode※1
- Scan
- Group Scan
- Dual Watch
- FM-Scan (Follow-Me Scan)
- TA Scan
- Encryption※1
- Privacy (Basic/Enhanced)※2
- VOX
- Talk Around
- Emergency
- Lone Worker
- TX Save Disable
- Direct Channel Entry※3
- Code Up/Down※1, 3
- Code Set※1, 3
- Speed Dial※1
- DTMF Code Set※1, 4
- ID Check※1, 3
- Text Message※2, 3
- ARTS™※1/ARTSII™ (Auto Range Transpond System)

※1: Analog mode
※2: Digital mode
※3: EVX-534/-539
※4: EVX-539 only

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Congratulations!

You now have at your fingertips a valuable communications tool, a Vertex Standard two-way radio! Rugged, reliable and easy to use, your Vertex Standard radio will keep you in constant touch with your colleagues for years to come, with negligible maintenance down-time. Please take a few minutes to read this manual carefully. The information presented here will allow you to derive maximum performance from your radio, in case questions arise later on.

Important Note

- ❒ There are no owner-serviceable parts inside the radio. All service jobs must be referred to an authorized Vertex Standard Service Representative.
- ❒ In order to maintain the specified water integrity performance, periodic maintenance is recommended.
- ❒ Should the radio sustain a severe shock (e.g. if it is dropped), the water integrity may be compromised, requiring service. Should this occur, contact your Authorized Vertex Standard Dealer.

INTRODUCTION

The **EVX-530** series are full-featured Hand-Held Digital/Analog Transceiver designed for business communications in the VHF/UHF Land Mobile bands. These transceivers are designed for reliable business communications in a wide variety of applications with a wide range of operating capability provided by their leading-edge design.

The **EVX-531** allows up to 32-channel capacity within a maximum 2 groups. The **EVX-534/-539** allows up to 512-channel capacity within a maximum 32 groups which can each be programmed with an 8-character Alpha-Numeric Tag.

Important channel frequency data is stored in the flash memory, and is easily programmable by a Vertex Standard licensed dealers using a personal computer with Vertex Standard Programming equipment: **FIF-12** USB Programming Interface, and **CT-106** Connection cable with **CE142** Software. Or, once a single radio is programmed, cloning cable **CT-27** can be used to program additional radios directly.

The pages which follow will detail the many advanced features provided in the **EVX-530** series transceiver. After reading this manual, you may wish to consult with your Network Administrator regarding precise details of the configuration of this equipment for use in your application.

Important Notice for North American Users Regarding 406 MHz Guard Band

The U.S. Coast Guard and National Oceanographic and Atmospheric Administration have requested the cooperation of the U.S. Federal Communications Commission in preserving the integrity of the protected frequency range 406.0 to 406.1 MHz, which is reserved for use by distress beacons. Do not attempt to program this apparatus, under any circumstances, for operation in the frequency range 406.0 - 406.1 MHz if the apparatus is to be used in or near North America.

Warning - Frequency band 406 - 406.1 MHz is reserved for use ONLY as a distress beacon by the US Coast Guard and NOAA. Under no circumstance should this frequency band be part of the pre programmed operating frequencies of this radio.

WARNING! FCC RF EXPOSURE REQUIREMENTS

This Radio has been tested and complies with the Federal Communications Commission (FCC) RF exposure limits for Occupational Use/Controlled exposure environment. In addition, it complies with the following Standards and Guidelines:

- ❒ FCC 96-326, Guidelines for Evaluating the Environmental Effects of Radio-Frequency Radiation.
- ❒ FCC OET Bulletin 65 Edition 97-01 (2001) Supplement C, Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
- ❒ ANSI/IEEE C95.1-1992, IEEE Standard for Safety Levels with Respect to Human Exposure to Radio Frequency Electromagnetic Fields, 3 kHz to 300 GHz.
- ❒ ANSI/IEEE C95.3-1992, IEEE Recommended Practice for the Measurement of Potentially Hazardous Electromagnetic Fields - RF and Microwave.

⚠ WARNING:

This radio generates RF electromagnetic energy during transmit mode. This radio is designed for and classified as ***Occupational Use Only***, meaning it must be used only during the course of employment by individuals aware of the hazards, and the ways to minimize such hazards. This radio is not intended for use by the General Population in an uncontrolled environment.

⚠ CAUTION:

To ensure that your expose to RF electromagnetic energy is within the FCC allowable limits for occupational use, always adhere to the following guidelines:

- ❍ **This radio is NOT approved for use by the general population in an uncontrolled exposure environment. This radio is restricted to occupational use, work related operations only where the radio operator must have the knowledge to control his or her RF exposure conditions.**

WARNING! FCC RF EXPOSURE REQUIREMENTS

- **When transmitting, hold the radio in a vertical position with its microphone 2 inches (5 cm) away from your mouth and keep the antenna at least 2 inches (5 cm) away from your head and body.**
- **The radio must be used with a maximum operating duty cycle not exceeding 50%, in typical Push-to-Talk configurations.**
  DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause FCC RF exposure compliance requirements to be exceeded. To keep the Body Worn configuration with the Vertex Standard CLIP-20 belt-clip, reduce the maximum operating duty cycle still more.
  The radio is transmitting when the red LED on the top of the radio is illuminated. You can cause the radio to transmit by pressing the P-T-T button.
- **SAR compliance for body-worn use was only demonstrated for the specific belt-clip (CLIP-20). Other body-worn accessories or configurations may NOT comply with the FCC RF exposure requirements and should be avoided.**
- **When operate the radio with the Vertex Standard CLIP-20 belt-clip, make the transmission time as short as possible, to keep the Body Worn configuration.**
- **Always use Vertex Standard authorized accessories.**
- **The information listed above provides the user with the information needed to make him or her aware of RF exposure, and what to do to assure that this radio operates with the FCC RF exposure limits of this radio.**
- **Electromagnetic Interference/Compatibility**
  During transmissions, this radio generates RF energy that can possibly cause interference with other devices or systems. To avoid such interference, turn off the radio in areas where signs are posted to do so.
  Do not operate the transmitter in areas that are sensitive to electromagnetic radiation such as hospitals, health care facilities, aircraft, and blasting sites.

WARNING! IC RSS GENERAL REQUIREMENT

ENGLISH

- ❒ Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.
- ❒ This radio transmitter (identify the device by certification number, or model number if Category II) has been approved by Industry Canada to operate with the antenna types listed at the right with the maximum permissible gain and required antenna impedance for each antenna type indicated. Antenna types not included in this list, having a gain greater than the maximum gain indicated for that type, are strictly prohibited for use with this device.

VHF MODEL	UHF MODEL
ATV-16A: 2.15 dBi, 50-ohm	ATU-16A: 2.15 dBi, 50-ohm
ATV-16B: 2.15 dBi, 50-ohm	ATU-16B: 2.15 dBi, 50-ohm
ATV-16C: 2.15 dBi, 50-ohm	ATU-16C: 2.15 dBi, 50-ohm
ATV-16XL: 2.15 dBi, 50-ohm	ATU-16F: 2.15 dBi, 50-ohm
	ATU-16BS: 2.15 dBi, 50-ohm
	ATU-16DC: 2.15 dBi, 50-ohm

- ❍ **When transmitting, hold the radio in a vertical position with its microphone 2 inches (5 cm) away from your mouth and keep the antenna at least 2 inches (5 cm) away from your head and body.**
- ❍ **The radio must be used with a maximum operating duty cycle not exceeding 50%, in typical Push-to-Talk configurations.**
  DO NOT transmit for more than 50% of total radio use time (50% duty cycle). Transmitting more than 50% of the time can cause IC RSS General Requirement to be exceeded. To keep the Body Worn configuration with the Vertex Standard CLIP-20 belt-clip, reduce the maximum operating duty cycle still more.
  The radio is transmitting when the red LED on the top of the radio is illuminated. You can cause the radio to transmit by pressing the P-T-T button.
- ❍ **SAR compliance for body-worn use was only demonstrated for the specific belt-clip (CLIP-20). Other body-worn accessories or configurations may NOT comply with the IC RSS General Requirement and should be avoided.**
- ❍ **When operate the radio with the Vertex Standard CLIP-20 belt-clip, make the transmission time as short as possible, to keep the Body Worn configuration.**

WARNING! IC RSS GENERAL REQUIREMENT

FRENCH

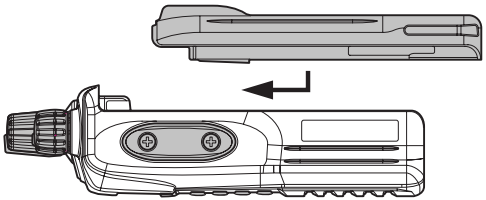
- ❒ Conformément à la réglementation d'Industrie Canada, le présent émetteur radio peut fonctionner avec une antenne d'un type et d'un gain maximal (ou inférieur) approuvé pour l'émetteur par Industrie Canada. Dans le but de réduire les risques de brouillage radioélectrique à l'intention des autres utilisateurs, il faut choisir le type d'antenne et son gain de sorte que la puissance isotrope rayonnée quivalente (p.i.r.e.) ne dépassepas l'intensité nécessaire à l'établissement d'une communication satisfaisante.
- ❒ Le présent émetteur radio (identifier le dispositif par son numéro de certification ou son numéro de modèle s'il fait partie du matériel de catégorie I) a été approuvé par Industrie Canada pour fonctionner avec les types d'antenne énumérés dans le droit et ayant un gain admissible maximal et l'impédance requise pour chaque type d'antenne. Les types d'antenne non inclus dans cette liste, ou dont le gain est supérieur au gain maximal indiqué, sont strictement interdits pour l'exploitation de l'émetteur.

VHF MODÈLE	UHF MODÈLE
ATV-16A: 2.15 dBi, 50-ohm	ATU-16A: 2.15 dBi, 50-ohm
ATV-16B: 2.15 dBi, 50-ohm	ATU-16B: 2.15 dBi, 50-ohm
ATV-16C: 2.15 dBi, 50-ohm	ATU-16C: 2.15 dBi, 50-ohm
ATV-16XL: 2.15 dBi, 50-ohm	ATU-16F: 2.15 dBi, 50-ohm
	ATU-16BS: 2.15 dBi, 50-ohm
	ATU-16DC: 2.15 dBi, 50-ohm

- ❍ **Pour émettre, tenez votre radio verticalement en plaçant le microphone entre 2,5 et 5 cm de la bouche. L'antenne doit toujours être à plus de 2,5 cm de votre tête.**
- ❍ **Le temps total d'émission de la radio ne doit pas dépasser 50% du temps de fonctionnement dans une configuration normale avec alternat. Par conséquent, vous ne devez PAS émettre pendant plus de 50% du temps total d'utilisation de la radio. Si cette règle n'est pas respectée, vous vous exposez à un dépassement de l'exposition aux fréquences électromagnétiques telle que définie par la norme de sécurité. La radio émet lorsque le voyant LED rouge (situé au sommet de la radio) est allumé. Vous pouvez déclencher l'émission en appuyant sur le bouton Alternat ou avec un micro-casque VOX, si la radio permet d'utiliser cet accessoire.**
- ❍ **La conformité SAR pour utilisation sur le corps n'a été confirmée que pour l'attache ceinture de nomenclature CLIP-20. L'utilisation de tout autre accessoire pour port sur le corps PEUT être non conforme aux normes d'exposition aux radio-fréquences et doit donc être évitée.**
- ❍ **N'opérez pas votre radio en mode d'émission lorsque vous la portez fixée sur le corps à l'aide de l'accessoire suivant : CLIP-20 attache ceinture.**

Battery Pack Installation and Removal

❒ To install the battery pack, align the battery pack to the radio with an offset about 1/2 inch (1.5 cm) from the top edge of battery compartment, then slide the battery pack upward until it locks in place with a "***Click***."



❒ To remove the battery, turn the radio off and remove any protective cases. Slide the Battery Pack Latch on the bottom of the radio toward the front panel while sliding the battery down about 1/2 inch (1.5 cm). Then lift the battery out from the radio.

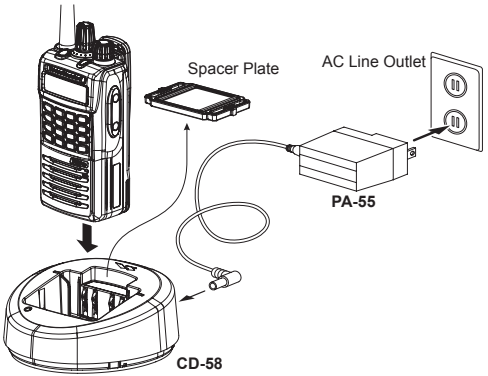
Do not attempt to open any of the rechargeable Lithium-Ion packs, as they could explode if accidentally short-circuited.

Battery Charging

❒ Remove the Spacer Plate from the nest of the optional **CD-58** Desktop Charger, if the Battery Spacer is installed.

❒ Insert the DC plug from the optional **PA-55** AC Adapter into the DC jack on the rear panel of the optional **CD-58** Desktop Charger, and then connect the **PA-55** AC Adapter to the AC line outlet.

❒ Insert the battery pack into the **CD-58** Desktop Charger while aligning the slots of the battery pack with the guides in the nest of the **CD-58**; refer to the following illustration for details on



proper positioning of the battery pack. If charging with the transceiver attached, turn the transceiver off. The antenna jack should be at the left side when viewing the charger from the front.

- ❒ If the battery pack is inserted correctly, the LED indicator will glow red. A fully-discharged battery pack will charge completely in 1.5 - 3.0 hours (depending on the battery pack being charged).
- ❒ When charging is completed, the LED indicator will change to green.
- ❒ Disconnect the battery pack from the **CD-58** Desktop Charger and unplug the **PA-55** AC Adapter from the AC line outlet.

⚠ ***1) Always use the Vertex Standard FNB-V133LI-UNI or FNB-V134LI-UNI Lithium-Ion Battery Pack.***
2) Use only the Vertex Standard CD-58 Desktop Charger and the Vertex Standard PA-55 AC Adapter.
3) To reduce the risk of explosion, recharge the batteries outside of hazardous locations.
4) Perform the battery charging where the ambient temperature range +41 °F to +104 °F (+5 °C to +40 °C). Charge out of this range could cause damage to the battery pack.
5) Battery Pack should not be exposed to excessive heat such as sunshine, fire, or the like.
6) Risk of explosion if battery is replaced by an incorrect type. Refer to the enclosed instructions for disposal of used batteries.
7) For further details and cautions of the charging, refer to the Operating Manual of the CD-58 Desktop Charger.

Low Battery Indication

As the battery discharges during use, the voltage gradually becomes lower. When the battery voltage becomes too low, substitute a freshly charged battery and recharge the depleted pack. The LED indicator on the top of the radio will blink red when the battery voltage is low.

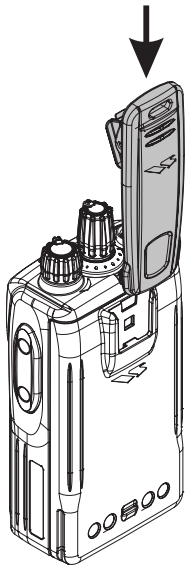
The **EVX-534/-539** can confirm the battery condition by the Battery Icon on the display. See page 13 for more information.

⚠ CAUTION ⚠

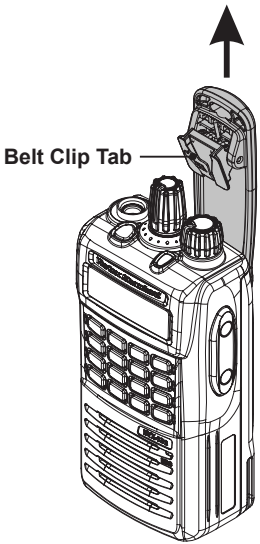
Danger of explosion if battery is replaced with an incorrect battery. Replace only with the same or equivalent type.

Belt Clip Installation and Removal

❒ To install the Belt Clip: align the Belt Clip to the groove of the Battery pack, then press the Belt Clip downward until it locks in place with a "***Click***."

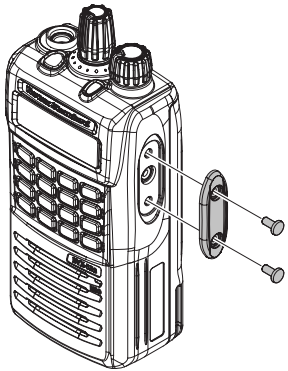


❒ To remove the Belt Clip: use a flat head screw driver to press the Belt Clip Tab away from the battery pack to unlock the Belt Clip, then slide the Belt Clip upward to remove it.



MIC/SP CAP Installation

Install the **MIC/SP** cap with the supplied screws.

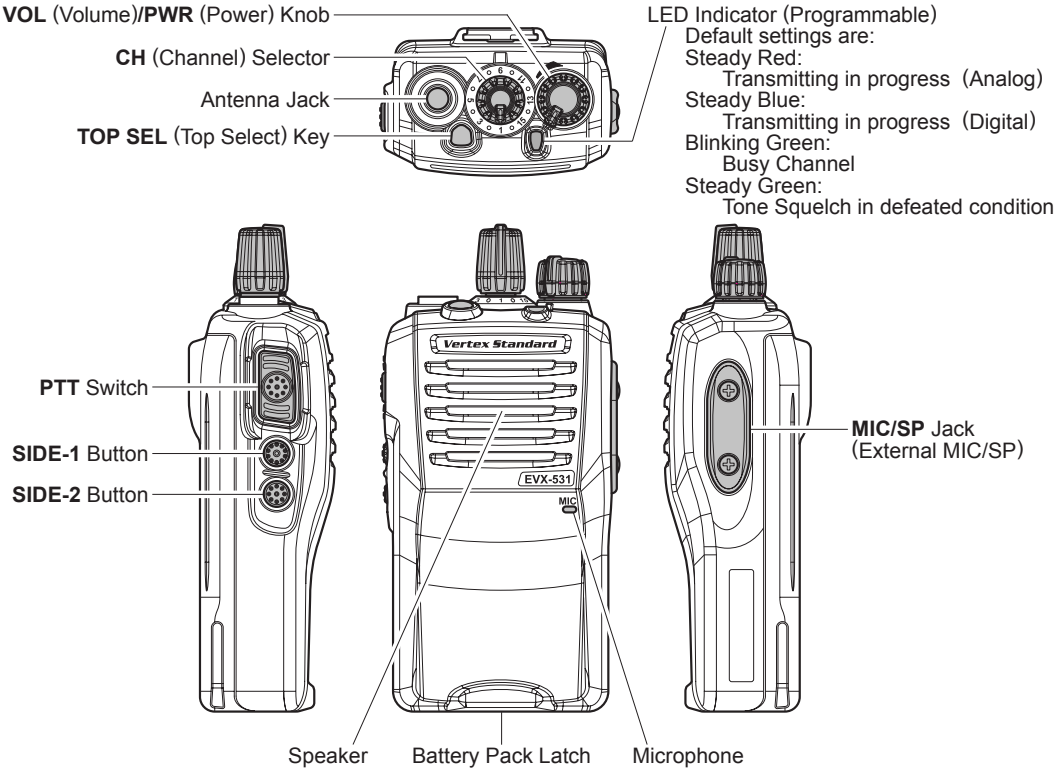


❒ **Use only the supplied screws when install the MIC/SP cap.**

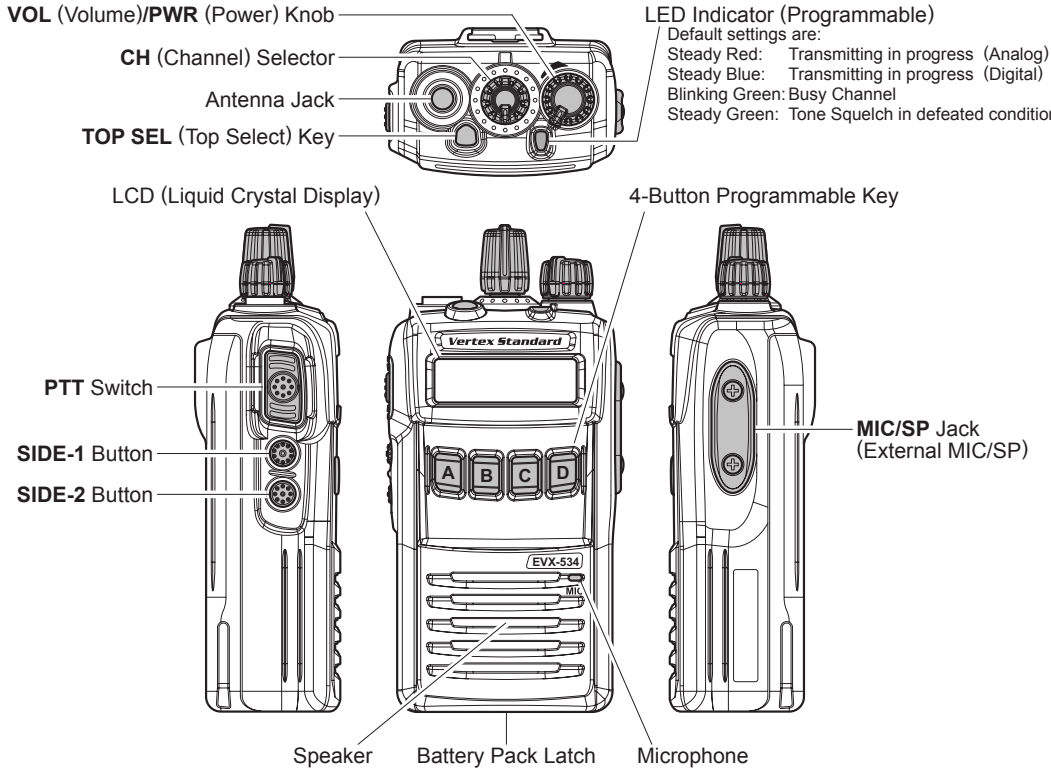
❒ **This radio does not keep the submersible Rating (IP57: 1 meter / 30 minutes) when the MIC/SP cap is not installed in the MIC/SP jack.**

NOTE

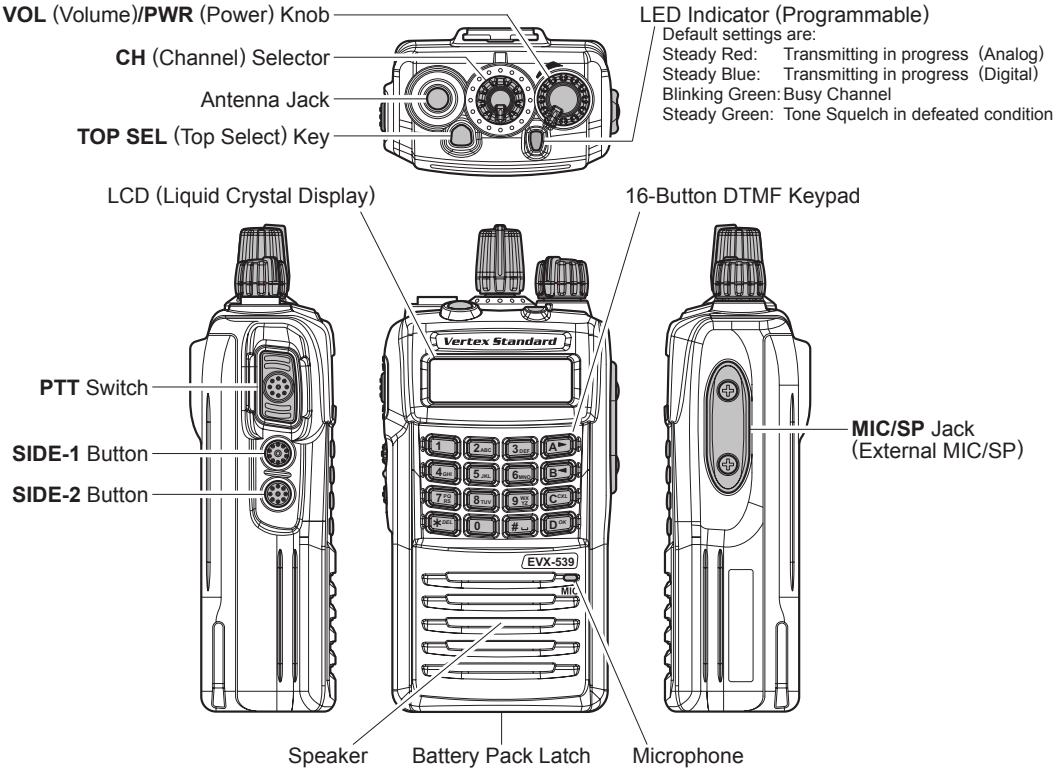
Controls & Connectors (EVX-531)



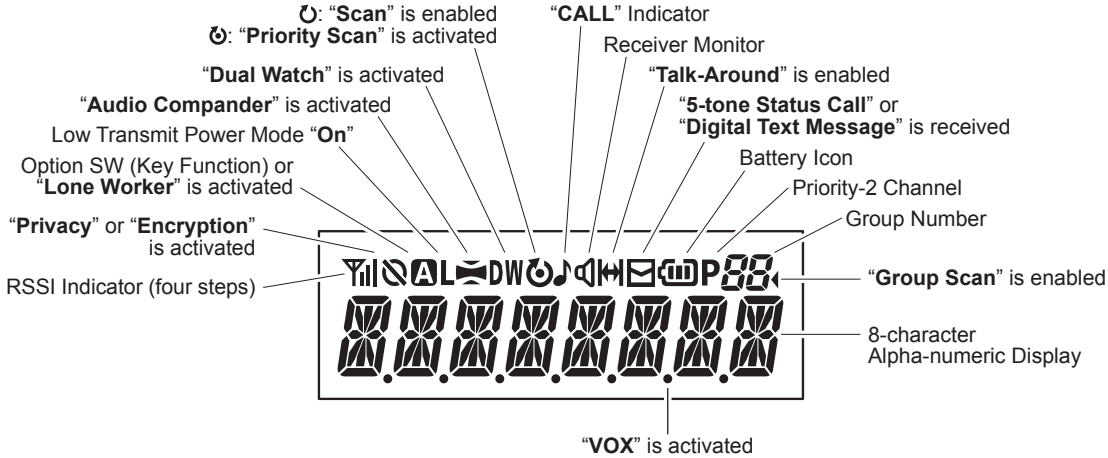
Controls & Connectors (EVX-534)



Controls & Connectors (EVX-539)



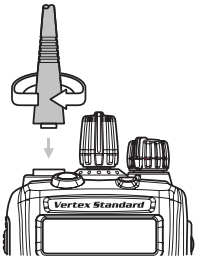
LCD Icons & Indicators (EVX-534 & EVX-539)



Battery Icon	
	: Full Battery Power
	: Moderate Battery Power
	: Low Battery Power
w/blink	: Poor Battery Power (Charge the Battery)

Preliminary Steps

- ❒ Install a charged battery pack onto the transceiver, as described previously.
- ❒ Screw the supplied antenna onto the Antenna jack.
  It is not recommended to operate this transceiver without an antenna connected.



- ❒ If you have a Speaker/Microphone, we recommend that it not be connected until you are familiar with the basic operation of the **EVX-530** series. Refer to next page for more information about Speaker/Microphone usage.

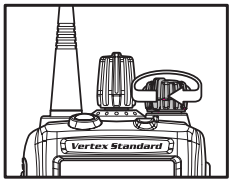
IMPORTANT NOTE

Water resistance of the transceiver (IP57: 1 meter / 30 minutes) is assured only when the following conditions:

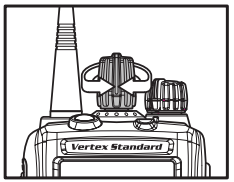
- ❒ Battery pack is attached to the transceiver;
- ❒ Antenna is connected to the antenna jack;
- ❒ and **MIC/SP** cap is installed in the **MIC/SP** jack.
- ❒ Use of a speaker microphone in the accessory connector negates the IP57 rating.

Operation Quick Start

- ❒ Turn the top panel's **VOL/PWR** knob clockwise to turn the radio on.



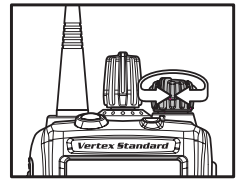
- ❒ Turn the top panel's **CH** Selector knob to choose the desired operating channel. A channel name will appear on the LCD. The radio announces the channel number, if the Channel Announcement Feature is enabled via the PC Programming Software.

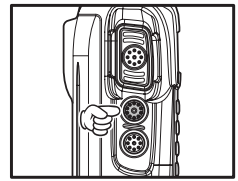


- ❒ If you want to select the operating channel from a different Channel Group, press (or press and hold) the Programmable key (assigned to the "**GROUP CHANGE**" function for the **EVX-531** or "**GROUP UP/DOWN**" function for the **EVX-534/-539**) to change desired Channel Group before selecting the operating channel.
  Note: Some models are programmed so that the

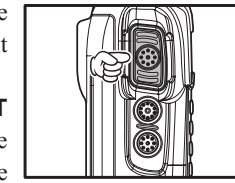
operating channels are selected by the Programmable key and the Channel Group is selected by the **CH** Selector knob. For further details, contact your Vertex Standard dealer.

❒ Rotate the **VOL/PWR** knob to set the volume level. If no signal is present on the analog channel, press (or press and hold) the Programmable key (assigned to the "**SQL OFF**" function; background noise will now be heard, and you may use this to set the **VOL/PWR** knob for the desired audio level. Press (or press and hold) the Programmable key again to quiet the noise and resume normal (quiet) monitoring.





❒ To transmit, monitor the channel and make sure it is clear.
Press and hold the **PTT** switch. Speak into the microphone area of the front panel grille in a normal voice level. To return to the Receive mode, release the **PTT** switch.

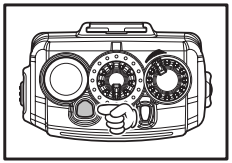


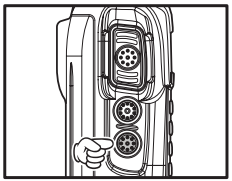
The Channel Announcement Feature works as described below

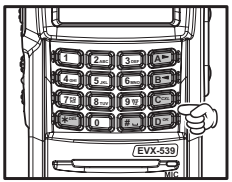
(1) In the EVX-534/-539 radio:
The maximum number of channels is 512 (32 channels maximum per group). The radio announces the channel number digit by digit.
For example, "Channel 1" is announced as "one" and "Channel 10" is announced as "one zero".

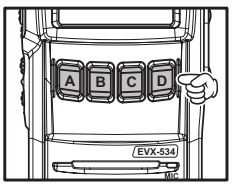
(2) In the EVX-531 radio:
The maximum number of channels is 32 (16 channels maximum per group). The radio announces Channels 1 - 9 by digit, while Channels 10 - 16 are announced by number.
For example, "Channel 10" is announced as "ten" and so on.

❒ Press the (Orange) **TOP SEL** key, **SIDE-2** button, or **EVX-534/-539** front panel's programmable keypad to activate one of the pre-programmed functions which may have been enabled at the time of programming by the dealer. See the next chapter for details regarding feature availability for this radio.

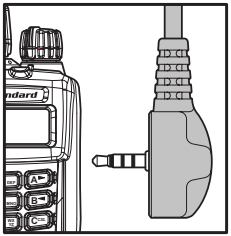








❒ If a Speaker/Microphone is available, remove the plastic cap and its two mounting screws from the right side of the transceiver, then align the connector of the Speaker/Microphone on the radio; secure the connector pin using the screws supplied with the Speaker/Microphone. Hold the speaker grille up next to your ear while receiving. To transmit, press the **PTT** switch on the Speaker/Microphone, just as you would on the main transceiver's body, and speak into the microphone on a normal voice level.



Note 1): Save the original plastic cap and its mounting screws. They should be reinstalled when not using the Speaker/Microphone.

2) When you press the PTT switch on the Speaker/Microphone, it disables the internal microphone, and vice versa.

- If the BCLO (Busy Channel Lockout) feature has been programmed on an ***analog channel***, the radio will not transmit when a carrier is present. Instead, the radio will generate short beep three times. Release the **PTT** switch and wait for the channel to be clear of activity.
- If the BTLO (Busy Tone Lockout) feature has been programmed on an ***analog channel*** or CCLO (Color Code Lockout) feature has been programmed on a ***digital channel***, the radio can transmit only when there is no carrier being received or when the carrier being received includes the correct tone (CTCSS tone or DCS code) on an ***analog channel*** or correct code on a ***digital channel***.

Automatic Time-Out Timer

If the selected channel has been programmed for automatic time-out, you must limit the length of each transmission. While transmitting, a beep will sound 10 seconds before time-out. Another beep will sound just before the deadline; the top panel's red LED ("**TX**" indicator) will disappear and transmission will cease soon thereafter. To resume transmitting, you must release the **PTT** switch and wait for the "penalty timer" to expire.

Programmable Key Functions

All version of the **EVX-530** provides three programmable function (**PF**) keys: **TOP SEL**, **SIDE-1**, and **SIDE-2** key. The **EVX-534** and **EVX-539** include the [**A**], [**B**], [**C**], and [**D**] keys. Furthermore, the **EVX-539** include the [**✱**] and [**#**] keys.

These **PF** keys can be customized, via programming by your Vertex Standard dealer, to meet your communications/network requirements.

The possible **PF** key programming features are illustrated on the next page, and their functions are explained beginning after page 21. For further details, contact your Vertex Standard dealer.

In this chapter, the following icons are used to indicate features supported in either the "Analog" mode or "Digital" mode:

[A]: Indicates a "Analog" mode only feature.
[D]: Indicates a "Digital" mode only feature.

For features that are available in both "Analog" and "Digital" modes, no icon is shown.

For future reference, check the box next to each function that has been assigned to the **PF** key on your particular radio, and keep it handy.

FUNCTION	PROGRAMMABLE KEY (PRESS KEY / PRESS AND HOLD KEY)								
	TOP SEL	SIDE-1	SIDE-2	[A]	[B]	[C]	[D]	[*]	[#]
None	/	/	/	/	/	/	/	/	/
Monitor	/	/	/	/	/	/	/	/	/
Monitor -Momentarily-	/—	/—	/—	/—	/—	/—	/—	/—	/—
Lamp×1	/	/	/	/	/	/	/	/	/
Low Power	/	/	/	/	/	/	/	/	/
Privacy / Encryption	/	/	/	/	/	/	/	/	/
Privacy Set×1	/	/	/	/	/	/	/	/	/
SET×1	/	/	/	/	/	/	/	/	/
SQL OFF	/	/	/	/	/	/	/	/	/
SQL OFF -Momentarily-	/—	/—	/—	/—	/—	/—	/—	/—	/—
SQL Set×1	/	/	/	/	/	/	/	/	/
Beep OFF	/	/	/	/	/	/	/	/	/
AF Minimum Volume×1	/	/	/	/	/	/	/	/	/
CH Announcement	/	/	/	/	/	/	/	/	/
Whisper	/	/	/	/	/	/	/	/	/
VOX	/	/	/	/	/	/	/	/	/
VOX Set×1	/	/	/	/	/	/	/	/	/
VOX Anti-Trip	/	/	/	/	/	/	/	/	/
Emergency	—/	—/	—/	—/	—/	—/	—/	—/	—/
Lone Worker	/	/	/	/	/	/	/	/	/
Group Change×2	/	/	/	/	/	/	/	/	/
Group Up×1	/	/	/	/	/	/	/	/	/
Group Down×1	/	/	/	/	/	/	/	/	/
Channel Up×1	/	/	/	/	/	/	/	/	/
Channel Down×1	/	/	/	/	/	/	/	/	/
Speed Channel Up×1	—/	—/	—/	—/	—/	—/	—/	—/	—/
Speed Channel Down×1	—/	—/	—/	—/	—/	—/	—/	—/	—/
RPI-1×1	/	/	/	/	/	/	/	/	/
RPI-2×1	/	/	/	/	/	/	/	/	/
PRI-2 Set	/	/	/	/	/	/	/	/	/
PRI-2 Disable	/	/	/	/	/	/	/	/	/
Direct CH 1×1	/	/	/	/	/	/	/	/	/
Direct CH 2×1	/	/	/	/	/	/	/	/	/
Direct CH 3×1	/	/	/	/	/	/	/	/	/
Direct CH 4×1	/	/	/	/	/	/	/	/	/
Direct CH Entry×1	/	/	/	/	/	/	/	/	/
Scan	/	/	/	/	/	/	/	/	/

FUNCTION	PROGRAMMABLE KEY (PRESS KEY / PRESS AND HOLD KEY)								
	TOP SEL	SIDE-1	SIDE-2	[A]	[B]	[C]	[D]	[*]	[#]
Group Scan	/	/	/	/	/	/	/	/	/
Dual Watch	/	/	/	/	/	/	/	/	/
FM Scan	/	/	/	/	/	/	/	/	/
Scan Set	/	/	/	/	/	/	/	/	/
Group Scan Set	/	/	/	/	/	/	/	/	/
TA Scan	/	/	/	/	/	/	/	/	/
Talk Around	/	/	/	/	/	/	/	/	/
Reset	/	/	/	/	/	/	/	/	/
Call 1	/	/	/	/	/	/	/	/	/
Call 2	/	/	/	/	/	/	/	/	/
Call 3	/	/	/	/	/	/	/	/	/
Call 4※1	/	/	/	/	/	/	/	/	/
Call 5※1	/	/	/	/	/	/	/	/	/
Code Up※1	/	/	/	/	/	/	/	/	/
Code Down※1	/	/	/	/	/	/	/	/	/
Code Set※1	/	/	/	/	/	/	/	/	/
Speed Dial	/	/	/	/	/	/	/	/	/
DTMF Code Set※3	/	/	/	/	/	/	/	/	/
Call	/	/	/	/	/	/	/	/	/
Status Set※1	/	/	/	/	/	/	/	/	/
Status Up※1	/	/	/	/	/	/	/	/	/
Status Down※1	/	/	/	/	/	/	/	/	/
Status Check※1	/	/	/	/	/	/	/	/	/
Duty※1	/	/	/	/	/	/	/	/	/
ID Check※1	/	/	/	/	/	/	/	/	/
ARTS Login※1	/	/	/	/	/	/	/	/	/
Text Message	/	/	/	/	/	/	/	/	/
Option SW1	/—	/—	/—	/—	/—	/—	/—	/—	/—
Option SW2	/	/	/	/	/	/	/	/	/
TX Save Disable	/	/	/	/	/	/	/	/	/
Lock	/	/	/	/	/	/	/	/	/

※1: activated in **EVX-534/-539**
※2: activated in **EVX-531**
※3: activated in **EVX-539**

Description of Operating Functions

MONITOR (A)

Press, (or press and hold), the assigned **PF** key to cancel any signaling features; the LED indicator will glow with a pre-defined color (Factory default: green).

In the **EVX-534/-539**, the "🔇" icon will be indicated on the display when the Monitor function is activated.

MONITOR -MOMENTARILY- (A)

Cancel any signaling features while pressing the assigned **PF** key.

In the **EVX-534/-539**, the "🔇" icon will be indicated on the display while canceling any signaling features.

LAMP (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to toggle the back light of the display and keypad "On" and "Off".

LOW POWER

Press, (or press and hold), the assigned **PF** key to set the radio's transmitter to "Low Power" mode, thus extending battery life. Press, (or press and hold), the key again to return to "Normal" transmit power when in difficult terrain.

In the **EVX-531**, the LED indicator will glow with a pre-defined color when the radio's transmitter is set to "Low Power" mode.

In the **EVX-534/-539**, the "**L**" icon will be indicated on the display when the radio's transmitter is set to "Low Power" mode.

PRIVACY (D)

Press, (or press and hold), the assigned **PF** key to toggle the Privacy feature "On" and "Off". The Privacy feature initiates an encryption algorithm that will protect your communication from unauthorized eavesdropping.

In the **EVX-534/-539**, the "🔒" icon will be indicated on the display when the Privacy feature is activated.

PRIVACY SET D (EVX-534 & EVX-539)

You can change the privacy settings to best meet your security requirements using this function:

- ❒ Press, (or press and hold), the assigned **PF** key. A tone will sound, and the current Privacy Code number and its tag name will appear on the display.
- ❒ Press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys) to select the desired Privacy Code. 16 Privacy Codes are available for selection.
- ❒ Press the [**D**] key to store the new setting. The display indicates "**- SET -**" briefly, then reverts to the normal channel indication.
  You may cancel the new setting by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

ENCRYPTION A

When the Voice Scrambler feature is enabled, press, (or press and hold), the assigned **PF** key to toggle the Voice Encryption "On" and "Off".

In the **EVX-534/-539**, the "🔇" icon will be indicated on the display when the Voice Scrambler is activated.

SET (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to activate the "User Set (Menu)" mode. See page 43 for more information of the "User Set (Menu)" mode.

SQL OFF A

Press, (or press and hold), the assigned **PF** key to open the SQL to hear background noise (unmute the audio).

In the **EVX-534/-539**, the "🔇" icon will be blinked on the display when the SQL OFF function is activated.

SQL OFF -MOMENTARILY- A

Opens the SQL to hear background noise (unmute the audio) while pressing the assigned **PF** key.

In the **EVX-534/-539**, the "🔇" icon will be blinked on the display while opening the SQL.

SQL SET A (EVX-534 & EVX-539)

You can manually adjust the squelch level using this function:

- ❒ Press, (or press and hold), the assigned **PF** key. A tone will sound, and the current squelch level will appear on the display.

- Press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys) to select the desired squelch level. Available selections are "**SQLLV OP** (Open)", "**SQLLV TH** (Threshold)", "**SQLLV NM** (Normal)" and "**SQLLV TI** (Tight)".
- Press the [**D**] key to store the new setting. The display indicates "**- SET -**" briefly, then reverts to the normal channel indication.
  You may cancel the new setting by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

BEEP OFF

Press, (or press and hold), the assigned **PF** key to disable the radio beeps temporarily. Press again, (or press and hold again), the assigned **PF** key to enable the radio beeps.

In the **EVX-534/-539**, when the Beep Off function is "on" and "off", the display indicates briefly "**BEEP OFF**" and "**BEEP ON**".

Note: if the Channel Announcement feature is activated on the **EVX-534/-539**, the Channel Announcement also disables and enables when the Beep Off function is "on" and "off".

AF MINIMUM VOLUME (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key, the display indicates "**AFATT ON**" briefly, and reduce the audio output to the (lower) level programmed. Again press, (or press and hold), the assigned **PF** key, the display indicates "**AFATT OF**" briefly, and resume normal audio output level. You may change the programmed (lower) level by the "User Set (Menu)" mode. See page 33 for more information.

CH ANNOUNCEMENT

Press, (or press and hold), the assigned **PF** key to select the channel change confirmation between "beep" (In the **EVX-534/-539**, indicates "**BEEP**" briefly) and "announcement" (In the **EVX-534/-539**, indicates "**ANNOUNCE**" briefly).

WHISPER

Press, (or press and hold), the assigned **PF** key to increase the microphone gain; thus you can speak in a low voice (whisper) temporarily. Press again, (or press and hold again), the assigned **PF** key to resume normal microphone gain.

In the **EVX-534/-539**, when the Whisper function is "on" and "off", the display indicates "**WHISP ON**"

and "**WHISP OFF**" briefly.

VOX

Press, (or press and hold), the assigned **PF** key to activate the VOX function; allowing hands-free, automatic activation of the transmitter, based on voice input into the microphone. You may disable the VOX function temporarily by pressing the **PTT** switch.

Press again, (or press and hold again), the assigned **PF** key to resume normal operation.

In the **EVX-534/-539**, 1) when the VOX function is activated by operation from the external equipment, a small dot ("**.**") will be indicated at the bottom right of the display, 2) when the VOX function is "on" and "off", the display indicates "**VOX ON**" and "**VOX OFF**" briefly.

VOX SET (EVX-534 & EVX-539)

You can manually adjust the VOX Gain using this function:

- ❒ Press, (or press and hold), the assigned **PF** key. A tone will sound, and the current VOX Gain level will appear on the display.
- ❒ Press the [**A**]/[**B**] button to select the desired VOX Gain level.
- ❒ Press the [**D**] key to store the new setting. The display indicates "**- SET -**" briefly, then reverts to the normal channel indication.
  You may cancel the new setting by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

VOX ANTI-TRIP

Press, (or press and hold), the assigned **PF** key to toggle the VOX Anti-Trip feature "On" and "Off".

When the VOX Anti-Trip feature is set to "On", the transceiver does not activate the transmitter section from the receiver audio or own beep sound.

In the **EVX-534/-539**, when the VOX Anti-Trip feature is "on" and "off", the display indicates "**ATRP ON**" and "**ATRP OFF**" briefly.

EMERGENCY

The **EVX-530** series includes an "Emergency" feature in either analog or digital modes, which may be useful for alerting another party monitoring on the same frequency as your transceiver's channel.

Press and hold the assigned **PF** key for a pre-programmed period to initiate an emergency call on the pre-defined channel. In the **EVX-534/-539**, the "**- EMG -**" indication will be indicated on the display. For further details contact your Vertex Standard dealer.

To revive the radio from the Emergency mode, just press and hold again the assigned **PF** key or turn off the radio.

LONE WORKER

Press, (or press and hold), the assigned **PF** key to activate the Lone Worker feature. The Lone Worker feature is designed to emit an alarm for 30 seconds when the Lone Worker Timer (programmed by your Vertex Standard dealer) has expired.

Press again, (or press and hold again), the assigned **PF** key, the Lone Worker feature is disabled. If the user does not reset the timer by pressing the **PTT** switch, the radio switches to Emergency mode.

In the **EVX-534/-539**, 1) when the Lone Worker feature is activated, the "A" icon will be indicated on the display, 2) when the Lone Worker feature is "on" and "off", the display indicates "**L-WK ON**" and "**L-WK OFF**" briefly.

GROUP CHANGE (EVX-531)

The **EVX-531** has two Channel Groups (Group 1 and Group 2).

Press (or press and hold) the assigned Programmable key to change the Channel Group to the opposite Group. When there is a radio in the Group 2, the LED indicator will blink with a pre-defined color. Once the desired Group is reached, rotate the **CH** Selector knob to select the desired channel within the selected Group.

GROUP UP/DOWN (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to select a different group of channels. A group number will appear at the upper right corner and a group name will appear briefly on the display.

CH UP/DOWN (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to select a different channel. A channel name will appear briefly on the display.

SPEED CH UP/DOWN (EVX-534 & EVX-539)

Press and hold the assigned **PF** key to cause the radio to begin stepping (repeatedly) upward or downward through the channels.

PRI-1 (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to recall the pre-programmed Priority Channel (Priority-1) by your Vertex Standard dealer directly. The "**P1**" will appear at the upper right corner on the display.

PRI-2 (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to recall the pre-programmed Priority Channel of the current group (Priority-2) by your Vertex Standard dealer directly. When PRI-2 channel is recalled, the "**P**" icon will appear on the display.

PRI-2 SET (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to toggle the current channel to the priority channel 2 "enable" and "disable". When PRI-2 channel is recalled, the "**P**" icon will be indicated on the display.

PRI-2 DISABLE (EVX-534 & EVX-539)

Press (or press and hold) the assigned **PF** key, the display indicates "**PRI2 DI**" briefly, and disable the priority channel 2 of the group temporarily.

Press again, (or press and hold again), the assigned **PF** key, the display indicates "**PRI2 EN**" briefly, and enabling the priority channel 2 of the group.

DIRECT CH 1 TO CH 4 (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to recall the pre-programmed channel by your Vertex Standard dealer directly.

DIRECT CH ENTRY (EVX-534 & EVX-539)

You can call the desired channel directly using this function:

- ❒ Press, (or press and hold), the assigned **PF** key. A tone will sound, and the current group/channel will appear on the display.
- ❒ In the **EVX-534**, select the desired digit of the group number and channel number using the [**A**]/[**B**] keys, then change the number using the **SIDE-1/SIDE-2** buttons.
  In the **EVX-539**, enter the desired group number

(two digits) and channel number (three digits) from the keypad ([**0**] - [**9**] key).

- ❒ Press the [**D**] key to call the new channel.
  You may cancel the direct channel entry by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

SCAN

The Scanning feature is used to monitor multiple channels programmed into the transceiver. While scanning, the transceiver will check each channel for the presence of a signal, and will stop on a channel if a signal is present. **EVX-530** series can scan both digital and analog frequency programmed channels simultaneously.

To activate scanning:

- ❒ Press, (or press and hold), the assigned **PF** key to activate scanning.
- ❒ The scanner will search the channels of each channel, looking for active ones; it will pause each time it finds a channel on which someone is speaking.
- ❒ Press again, (or press and hold again), the assigned **PF** key to disable scanning, and receive the channel which was chosen when pressed the **PF** key.

Note: Your dealer may have programmed your radio to stay on one of the following channels if you press the **PTT** switch during scanning pause:

- ☐ "Scan Pause" channel ("Talk Back")
- ☐ "Last Busy" channel
- ☐ "Priority-1" channel
- ☐ "Priority-2" channel
- ☐ "User Programmed" channel ("Select Channel")
- ☐ The channel which defined in the **CH** Selector knob.

GROUP SCAN

The scanning feature is used to monitor multiple channels programmed into the transceiver. While scanning, the transceiver will check each channel of the programmed group for the presence of the signal, and will stop on a channel if a signal is present.

Press, (or press and hold), the assigned **PF** key to activate the scanning on the selected groups.

Press again, (or press and hold again), the assigned **PF** key to disable the group scan mode, and receive

the channel which was chosen when pressed the **PF** key.

In the **EVX-534/-539**, when the Group Scan is activated, the display indicates "**GRP SCAN**" briefly, and current group channel number will appear at the upper right corner on the display.

DUAL WATCH

The Dual Watch feature is similar to the SCAN feature, except that only two channels are monitored:

- ☐ The current operating channel; and
- ☐ The Priority-2 channel.

To activate Dual Watch:

- ❒ Press, (or press and hold), the assigned **PF** key to activate the Dual Watch feature.
- ❒ The scanner will search the two channels; it will pause each time it finds a channel on which someone is speaking.

To stop Dual Watch:

- ❒ Press, (or press and hold), the assigned **PF** key to disable the Dual Watch feature.
- ❒ The radio receives the channel which was chosen when pressed the **PF** key.

In the **EVX-534/-539**, when the Dual Watch feature is activated, the "**DW**" icon will be indicated on the display.

FM SCAN (FOLLOW-ME SCAN)

The FM (Follow-Me) Scan feature checks a user-assigned priority channel regularly as you scan other channels. Thus, if only Channels 1, 3, and 5 (of the 8 available channels) are designated for "Scanning", the user may nonetheless assign Channel 2 as the "user-assigned" priority channel via the FM Scan.

To activate FM (Follow-Me) Scan, first select the channel you want to designate as the "user-assigned priority channel" and press, (or press and hold), the assigned **PF** key (in the **EVX-534/-539**, the display indicates "**FM SCAN**" briefly). Then rotate the **CH** Selector knob to recall to the "Scanning Start" channel which has been programmed by your dealer to activate the scanner. When the scanner stops on an "Active" channel, the user-assigned priority channel will automatically be checked every few seconds; if activity is found on the user-assigned priority channel, the radio will switch between it and the dealer-assigned priority channel, if any.

SCAN SET

Press, (or press and hold), the assigned **PF** key to add/delete the current channel to/from your scanning list.

To store a particular channel to your scanning list, press, (or press and hold), the assigned **PF** key. If you delete a channel from your scanning list, press, (or press and hold), the assigned **PF** key again.

When the scanner is paused, you may remove the channel from the scan list temporarily by pressing, (or press and holding), the same key.

In the **EVX-534/-539**, 1) when store a particular channel to your scanning list, the display indicates "**SCN SET**" briefly and "↻" icon will appear on the display. 2) when delete a channel from your scanning list, the display indicates "**SCN SKIP**" briefly and the "↻" icon will disappear from the display.

GROUP SCAN SET

You may wish to have the Scanner pass through more than one Group during the scanning process (normally, scanning is performed within the current group only).

To include the current Group in the scanning loop, press, (or press and hold), the assigned **PF** key. To remove a current Group from Group Scan, press, (or press and hold), the assigned **PF** key again.

In the **EVX-534/-539**, 1) when include the current group in the scan loop, the "◀" icon will appear on the display. 2) when remove a current group from group scan, the "◀" icon will disappear from the display.

TA SCAN

Press, (or press and hold), the assigned **PF** key to toggle the TA (Talk Around) scan feature "On" and "Off".

While TA scan is proceeding, the transceiver will search both the transmit and receive frequencies (the "⏮" icon will blink on the display). When a signal is encountered on the receive frequency, the transceiver will pause until the signal disappears (the "⏮" icon will appear but not blink on the display). When a signal is encountered on the transmit frequency, the transceiver will check for activity on the receive frequency every few seconds (interval programmed by your Vertex Standard dealer).

Note: The TA Scan feature does not activate on the Simplex Channel.

TALK AROUND (TA)

Press, (or press and hold), the assigned **PF** key to activate the Talk Around feature when you are operating on duplex channel systems (separate receive and transmit frequencies, utilizing a "repeater" station). The Talk Around feature allows you to bypass the repeater station and talk directly to a station that is nearby. This feature has no effect when you are operating on "simplex" channels, where the receive and transmit frequencies are already the same. In the **EVX-534/-539**, when the Talk Around feature is activated, the "⇹" icon will be indicated on the display.

Note that your dealer may have mode provision for "Talk Around" channels by programming "repeater" and "Talk Around" frequencies on two adjacent channels. If so, the key may be used for one of the other Pre-Programmed Functions.

Note: The Talk Around feature does not activate on the Simplex Channel.

RESET (A)

Press (or press and hold) the assigned **PF** key to reset the RFC (Ready for Communication) condition.

CALL 1 TO CALL 3 (EVX-531)
CALL 1 TO CALL 5 (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to send a pre-programmed call signal of the 2-Tone, 5-Tone, MDC1200® or Digital Call.

CODE UP/DOWN (A) (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to select a 2-Tone or 5-Tone encode code from the pre-programmed encode list.

CODE SET (A) (EVX-534 & EVX-539)

You can change the desired digit of the 5-Tone encode code using this function:

- ❒ Press, (or press and hold), the assigned **PF** key.
- ❒ Enter the desired 5-Tone encode code directly from the keypad ([**0**] - [**9**] key).
- ❒ Press the [**D**] key to store the new setting. The display indicates "**- SET -**" briefly, then reverts to the normal channel indication.
  You may cancel the new setting by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

SPEED DIAL (A)

Your Vertex Standard dealer may have pre-programmed Auto-Dial telephone number memories into your radio.

To dial a number:
In the **EVX-531/-534**, press, (or press and hold), the assigned **PF** key, then press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys) to select the Auto-Dial memory number you wish to dial. Press the **PTT** switch to send a pre-defined DTMF tone. The DTMF tones sent during the dialing sequence will be heard in the speaker.

In the **EVX-539**, press, (or press and hold), the assigned **PF** key, then press the keypad ([**0**] - [**9**] key) corresponding to the Auto-Dial memory number you wish to dial. The **EVX-539** send a pre-defined DTMF tone, and the DTMF tones sent during the dialing sequence will be heard in the speaker.

DTMF CODE SET (A) (EVX-539)

- ❒ Press, (or press and hold), the assigned **PF** key to start entering the DTMF dialing sequence.
- ❒ Enter the DTMF digit directly from the keypad ([**0**] - [**9**] key).
- ❒ After entering all DTMF digits, press the **PTT** switch to transmit the DTMF code.

CALL (EVX-531) (A)

Press, (or press and hold), the assigned **PF** key to send a 2-tone/5-tone sequential tone.

CALL (EVX-534 & EVX-539)

The Call feature of the **EVX-534/-539** is different by the operating system and operating mode.

When using the DTMF Paging System (**EVX-539**)
This feature, if enabled, allows the user to send any 3-digit Page Call code, used to call other similarly-equipped stations. Press, (or press and hold), the assigned **PF** key, followed by the three digits representing the Page Call code of the station you wish to call. Three tones will be heard after the last key is pressed (the new code will now be transmitted).

The receiver squelch of the other station will be opened, and you can begin communication.

When using the 2-tone/5-tone Signaling System
This feature, if enabled, Press, (or press and hold), the assigned **PF** key to send a 2-tone/5-tone sequential tone.

When using the MDC1200 System

This feature, if enabled, Press, (or press and hold), the assigned **PF** key to send an MDC1200 code. Available codes are "**CALL ALT**", "**SEL CALL**", "**RADIO CK**", "**STUN**" and "**RIVIVE**".

- ❒ Press, (or press and hold), the assigned **PF** key to enter the "Call Menu" mode.
- ❒ Press the **SIDE-1**/**SIDE-2** buttons to select the desired Call mode, then press the [**D**] key to accept the selection. (You may cancel the selection by pressing the [**C**] key).
- ❒ Press the **SIDE-1**/**SIDE-2** buttons to select the station to be called.
  Note: You may enter the station's ID number (four digits) directly from the keypad ([**0**] - [**9**], [**A**] - [**D**], [**#**]: substitute for "E", and [**✱**]: wild card).
- ❒ Press the **PTT** switch to send an MDC1200 call.

When operating in the Digital mode

This feature, if enabled, allows the user confirm and/or edit the Contact Alias.

- ❒ Press, (or press and hold), the assigned PF key to enter the "Call Menu" mode.
- ❒ Press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys) to select the desired Contact Alias. You may find the "New List" and "Manual" category at the last of the indication loop. Describes these two functions later.
- ❒ Press the [**D**] key to accept the selection.
  You may cancel the selection by pressing the [**C**] key.

I) If the TX ID Type of the selected Contact Alias is "Group Call" or "All Call" (indicates the "**GC**" or "**AC**" icon at the upper right corner of the display), you may confirm the Call ID of the Contact Alias by the following operation:

- ❍ Press the [**D**] key to confirm the "Call ID" of the selected Contact Alias.
- ❍ Press the [**C**] key to return the display to the "Tag Name" indication.

II) If the TX ID Type of the selected Contact Alias is "Private Call" (indicates the "**PC**" icon at the upper right corner of the display), you may confirm and edit the Contact Alias by the following operation:

- ❍ Press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys) to select the function you wish to. Available selections are "**CALL ALT**", "**VIEW ID**", "**EDIT TAG**※", "**EDIT ID**※", "**ALT SEL**", "**DEL**

LIST※", "**RADIO CK**", "**RADIOMON**", "**REVIVE**" and "**STUN**" (※:**EVX-539** only).

- Press the [**D**] key to accept the selected function. Refer to follows for detailed operation of each function.
- Press the [**C**] key to cancel the "Call" feature and return to the normal operation, if desired.

CALL ALT: You may contact with the selected Contact Alias.
Press the [**D**] key to transmit the call alert command to the designated radio. If the designated radio is active, the designated radio transmits the ACK command and displays your ID number on the display. If not, your radio's display indicates "NO ACK".

VIEW ID: You may confirm the Call ID of the Contact Alias.
Press the [**D**] key to confirm the "Call ID". Press the [**C**] key to return the display to the "Tag Name" indication.

EDIT TAG: You may edit the "Tag Name" of the selected Contact Alias if your transceiver is **EVX-539**. However, you can not edit the "Tag Name" of the Contact Alias which determined by the CE142 Programming Software.
Press the [**D**] key, then edit the "Tag Name" using the [**0**] - [**9**] key (for select the character) and [**A**]/[**B**] key (for select the digit). You may delete the current character by pressing the [**∗**] key, or insert the space by pressing the [**#**] key. Press the [**D**] key again, the display indicates "**-SAVED-**" briefly and store the new setting. You may cancel the new setting by pressing the [**C**] key.

EDIT ID: You may edit the "ID number" of the selected Contact Alias if your transceiver is **EVX-539**. However, you can not edit the "ID number" of the Contact Alias which determined by the CE142 Programming Software.
Press the [**D**] key, then edit the "ID number" using the [**0**] - [**9**] key (for select the character) and [**A**]/[**B**] key (for select the digit). Press the [**D**] key again, the display indicates "**-SAVED-**" briefly and store the new setting. You may cancel the new setting by pressing the [**C**] key.

ALT SEL: You may change the alert tone which assigned to the selected Contact Alias.
Press the [**D**] key, then press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys) to select the desired alert tone. Available selections are "TONE A" to "TONE J" and "NONE". Press the [**D**] key again to store the new setting. You may cancel the new setting by pressing the [**C**] key.

DEL LIST: You may delete the desired Contact Alias from the contact list if your transceiver is **EVX-539**. *Important Note*: the deleted Contact Alias can not be restored, and you can not delete the Contact Alias which determined by the CE142 Programming Software.
Press the [**D**] key, the display indicates "**DEL Y/N**"("**Y**" is blinking). Press the [**D**] key again, the display indicates "**-SAVED-**" briefly, then reverts to first Contact Alias of the contact list. You may cancel the deleting the Contact Alias by pressing the [**C**] key.

RADIO CK: You may check the radio status of the selected Contact Alias.
Press the [**D**] key to transmit the radio status command to the designated radio. If the designated radio is alive, the designated radio transmits the ACK command, and then your radio's display indicates "**ACK RECV**". If not, your radio's display indicates "**NO ACK**".

RADIOMON: You may monitor the situation around the designated radio by remote control.
Press the [**D**] key to remote-control the designated radio. If the designated radio is alive, the designated radio will automatically transmit for the programmed period to transmit the situation around the radio to you. Your radio's display indicates "**ACK RECV**", and outputs the situation around the designated radio from the speaker. If the designated radio is not alive, your radio's display indicates "**NO ACK**" and no responses.

REVIVE: You may revive the stunned radio by remote control.
Press the [**D**] key to transmit the revive command to the stunned radio. When the stunned radio receives the revive command, the stunned radio revives, and then transmits the ACK command automatically. Your radio's display indicates "**ACK**

RECV". If your radio's display indicates "**NO ACK**", the revive command did not succeed.

STUN: You may stun the designated radio forcibly by remote control.
Press the [**D**] key to transmit the stun command to the designated radio. If the designated radio is alive, the designated radio transmits the ACK command and stuns it. If not, your radio's display indicates "**NO ACK**", the stun command did not succeed.
The stunned radio will revive by the REVIVE function described previously.

III) New List: This category allows you to create the desired Contact Alias and save it into the contact list.

- ❒ Press the [**D**] key, the display indicates "**ENTER ID**" briefly, enter the "ID number" you wish to, using the [**0**] - [**9**] key (for select the number) and [**A**]/[**B**] key (for select the digit).
- ❒ Press the [**D**] key again, the display indicates "**ENTERTAG**" briefly, enter the desired "Tag Name" using the [**0**] - [**9**] key (for select the character) and [**A**]/[**B**] key (for select the digit).
  You may delete the current character by pressing the [**✱**] key, or insert the space character by pressing the [**#**] key.
- ❒ Press the [**D**] key again, the display indicates "**ALT SEL**" briefly, select the desired alert tone using the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**] keys).
- ❒ Press the [**D**] key again to store the new setting into the contact list as the Private Call. You may cancel the new setting by pressing the [**C**] key.

IV) Manual: This category allows you to perform the "**CALL ALT**", "**RADIO CK**", "**RADIOMON**", "**REVIVE**" and "**STUN**" function for the desired Contact Alias manually by the following operation.

- ❒ Press the [**D**] key, the display indicates "**ENTER ID**" briefly, enter the "ID number" you wish to operate the function, using the [**0**] - [**9**] key (for select the number) and [**A**]/[**B**] key (for select the digit).
- ❒ Press the [**D**] key again, then press the **SIDE-1**/**SIDE-2** buttons (or [**A**]/[**B**]keys) to select the desired function described above.
- ❒ Press the [**D**] key to perform the function. You may cancel the function by pressing the [**C**] key.

STATUS SET (A) (EVX-534 & EVX-539)

You can change the 5-tone status code using this function:

- ❒ Press, (or press and hold), the assigned **PF** key to change the 5-tone status code.
- ❒ Enter the 5-tone status code directly from the keypad ([**0**] - [**9**] key).
- ❒ Press the [**D**] key, The display indicates "**- SET -**" briefly and store the new number to the 5-tone status code.
  You may cancel the new setting by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

STATUS UP/DOWN (A) (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to select a 5-tone status code from the pre-defined status list.

STATUS CHECK (A) (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to check the 5-tone receive status code. When you press this key, the display will indicate the "Message" corresponding to the receive status condition per the pre-defined status list.

DUTY (A) (EVX-534 & EVX-539)

Press, (or press and hold), the assigned **PF** key to toggle the Duty function of the 2-tone, 5-tone, or MDC1200® "On" and "Off".

When the Duty function is set to "On", the display indicates "**DUTY ON**" briefly and the user will always hear (depending on the sub-audio signaling) all traffic on the paging channel. The radio will sound the paging alert when it receives the programmed 2-tone, 5-tone, or MDC1200®.

When the Duty function is set to "Off", the display indicates "**DUTY OFF**" briefly and the user will NOT hear normal radio traffic on the paging channel. The radio will sound the paging alert and unmute only when it receives the programmed 2-tone, 5-tone, or MDC1200®.

ID CHECK (A) (EVX-534 & EVX-539)

This function allows logged ID of the DTMF Signaling or 5-tone Signaling to be reviewed and relayed (5-tone Signaling only) to a specific station:

- ❒ Press, (or press and hold), the assigned **PF** key to display the logged ID of the DTMF Signaling or 5-tone Signaling.

- ❒ Press the **SIDE-1**/**SIDE-2** buttons to select the logged ID of the DTMF Signaling or 5-tone Signaling.
- ❒ Press the [**B**] key to toggle the display between the "ID Code display" and "Channel Tag display".
- ❒ Press the [**D**] key to send the Call back, when recalling the ID of the "5-tone Signaling", if desired.
  You may cancel the Call back sending by pressing the [**C**] key. In this case, the display indicates "**- CANCEL -**" briefly.

ARTS LOGIN (EVX-534 & EVX-539)

This function enable the displaying the logged ID of the MDC1200® ARTS™ (ARTSII™) or Digital ARTS™ (ARTSII™).

- ❒ Press, (or press and hold), the assigned **PF** key to display the number of the logged station of the MDC1200® ARTS™ (or ARTSII™) for 1.5 seconds, and then the display indicates the "ID number" of the logged station.
- ❒ Press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to indicate the "ID number" of other stations, if needed.
- ❒ Press the [**C**] key to resume normal display.

TEXT MESSAGE (EVX-534 & EVX-539)

You may receive/send the message from/to other radio.

- ❒ Press, (or press and hold), the assigned **PF** key to enter the "Text Message" mode.
- ❒ Press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the function you wish to. Available functions are "**IN BOX**", "**WRITE**" (**EVX-539** only), and "**SEL MSG**".
- ❒ Press the [**D**] key to accept the selected function. Refer to follows for detailed operation of each function.
- ❒ Press the [**C**] key to cancel the "Text Message" feature and return to the normal operation, if desired.

IN BOX: You may confirm/delete the received message in this function.

Confirm

- ❍ Press the [**A**]/[**B**] keys to select the received message you wish to confirm. The display will scroll the selected message automatically. The **EVX-534/-539** can memorize up to 28 messages (first-in first-out basis). The message number indicates

at the upper right corner of the display. You may find the "**ALL DEL**" menu which is located at the last message loop. Describes this menu later.

- ❍ Press the **SIDE-1** button at once (or press the **SIDE-2** button twice) to confirm the "Call ID" of the selected message, if desired.
- ❍ Press the [**A**]/[**B**] keys to select other received message, or press the [**C**] key to return to the top of the "IN BOX" function.

Delete (Individual message)

- ❍ Press the [**A**]/[**B**] keys to select the received message you wish to delete.
- ❍ Press the **SIDE-2** button at once (or press the **SIDE-1** button twice) to select the "**DELETE**" menu, then press the [**D**] key. The display indicates "**DEL Y/N**"("**Y**" is blinking).
- ❍ Press the [**D**] key again to delete the selected message. You may cancel the deleting the message by pressing the [**C**] key.
- ❍ Press the [**A**]/[**B**] keys to select other received message you wish to delete, or press the [**C**] key to return to the top of the "IN BOX" function.

Delete (All messages)

- ❍ Press the [**A**]/[**B**] keys to select the "**ALL DEL**" menu which is located at the last message loop, then press the [**D**] key. The display indicates "**DEL Y/N**"("**Y**" is blinking).
- ❍ Press the [**D**] key again to delete the all messages. You may cancel the deleting the all messages by pressing the [**C**] key.

WRITE: If your transceiver is **EVX-539**, you may create a sending message and send/save it in this function. The **EVX-539** can memorize up to 24 messages include pre-programmed message which determined by the CE142 Programming Software.

Create the message

- ❍ Create the message using the [**0**] - [**9**] key (for select the character) and [**A**]/[**B**] key (for select the digit). The **EVX-539** can create up to 32 characters.
  You may delete the current character by pressing the [**✱**] key, or insert the space character by pressing the [**#**] key.
- ❍ Press the [**D**] key, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "**SEND**"

or "**SAVE**" menu depending on your purpose, and move to each step as follow.

Send the message

❍ Press the [**D**] key, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "Call ID" you wish to send a message.
You may enter a new "Call ID" manually by following operation:

❍ Press the **SIDE-1**/**SIDE-2** buttons to select the "**MANUAL**" menu which is located at the last "Call ID" loop.

❍ Press the [**D**] key, then enter the "Call ID" using the [**0**] - [**9**] key.

❍ Press the [**D**] key again to send the message. The display indicates "TEXT MSG" and "Call ID" alternately while sending the message.

Save the message

❍ Press the [**D**] key to save the created message.

SEL MSG: You may send/edit/delete the message in this function.

Send the message

❍ Press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the message you wish to send.

❍ Press the [**D**] key, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "**SEND**" menu.

❍ Press the [**D**] key again, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "Call ID" you wish to send a message.
You may enter a new "Call ID" manually by following operation:

- Press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "**MANUAL**" menu which is located at the last "Call ID" loop.
- Press the [**D**] key, then enter the "Call ID" using the [**0**] - [**9**] key.

❍ Press the [**D**] key again to send the message. The display indicates "TEXT MSG" and "Call ID" alternately while sending the message.

Edit the message

Important Note: You can not edit the message which determined by the CE142 Programming Software.

❍ Press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select message you wish to edit.

❍ Press the [**D**] key, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "**EDIT**" menu.

- Press the [**D**] key again, then edit the message using the [**0**] - [**9**]] key (for select the character) and [**A**]/[**B**] key (for select the digit).
- Press the [**D**] key, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "**SAVE**" menu.
- Press the [**D**] key again to save the edited message.

Delete the message

Important Note: You can not delete the message which determined by the CE142 Programming Software.

- Press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the message you wish to delete.
- Press the [**D**] key, then press the [**A**]/[**B**] keys (or **SIDE-1**/**SIDE-2** buttons) to select the "**DELETE**" menu.
- Press the [**D**] key. The display indicates "**DEL Y/N**"("**Y**" is blinking).
- Press the [**D**] key again to delete the selected message. You may cancel the deleting the message by pressing the [**C**] key.

OPTION SWITCH 1

Activates the optional accessory while pressing the assigned **PF** key.

OPTION SWITCH 2

Press, (or press and hold), the assigned **PF** key to toggle the optional accessory "On" and "Off".

TX SAVE DISABLE

The Transmit Battery Saver helps extend battery life by reducing transmit power when a very strong signal from an apparently nearby station is being received. Under some circumstances, though, your hand-held radio may not be heard well at the other end of the communication path, and high power may be necessary at all times.

Press, (or press and hold), the assigned **PF** key to disable the Transmit Battery Saver, if you are operating in a location where high power is almost always needed.

Press again, (or press and hold again), the assigned **PF** key, the Transmit Battery Saver activates to reduce the transmit power when a very strong signal from an apparently nearby station is being received.

In the **EVX-534/-539**, when the Transmit Battery Saver is "on" and "off", the display indicates "**TX SA ON**" and "**TX SAOFF**" briefly.

LOCK

Press (or press and hold) the assigned **PF** key to lock the **CH** Selector knob, Programmable keys, and **PTT** switch. You may change the lockout configuration by the "User Set (Menu)" mode. See page 33 for more information.

LOCK

In order to prevent accidental channel change or inadvertent transmission, various aspects of the **CH** Selector knob, Programmable keys, and **PTT** switch may be locked. The precise lockout configuration is programmed by your Dealer.

To locked out the key locking, turn the radio off. Now, press and hold the **PTT** and **SIDE-2** key while turning the radio on again.

To cancel locking, repeat this process.

ARTS™ (Auto Range Transpond System)

This system is designed to inform you when you and another ARTS™-equipped station are within communication range.

During ARTS™ operation, when the radio receives an incoming ARTS™ signal, a short beep will sound. If you move out of range for more than two minutes, your radio senses that no signal has been received; a short triple-beep will sound. If you subsequently move back into communication range, as soon as the other station transmits, a short beep will sound again.

ARTSII™ (Auto Range Transpond System)

ARTSII™ is an enhanced feature of the ARTS™ system which identifies the radio id's both in and out of range indvidually using either digital mode, or MDC-1200® encode/decode in analog mode.

User Set Mode

The **EVX-534/-539** includes a "User Set" (Menu) Mode which allows the user to define or configure various settings, such as Squelch, Key lockout configuration, etc. To activate the "User Set" (Menu) Mode:

- ❒ Press the **PF** key assigned to the "**SET**" function to enter the "User Set" (Menu) Mode.
- ❒ Select the Set Mode item you wish to change using the [**A**]/[**B**] keys, then use the **SIDE-1**/ **SIDE-2** keys to adjust the setting of the selected item.
- ❒ Repeat previous step to adjust other Set Mode item, if desired.
- ❒ Press the [**D**] key to save the new setting and the display indicates "**- SAVED -**" briefly, then exits to normal operation.
  You may exit to normal operation without saving the new setting by pressing the [**C**] key.

Set Mode Item	Description	Available Values
SQL	Sets the Squelch level. This Set Mode Item is appeared on the Analog channel only.	SQL OP (Open), SQL TH (Threshold), SQL NM (Normal), SQL TI (Tight)
Beep	Enables/Disables the Key Beeper.	BEEP ON, BEEP OFF
Bell	Enables/Disables the Bell function (Alert tone activated by incoming signaling).	BELL ON, BELL OFF
Light	Enables/Disables the back light of the display and keypad.	LIGHT ON, LIGHT OFF
Key	Enables/Disables the Key Lock function.	KEY FRE (Free), KEY LCK (Lock)
PTT	Enables/Disables the PTT Lock function.	PTT FRE (Free), PTT LCK (Lock)
Scan	Engages/Disengages Scanning.	SCAN ON, SCAN FM (Follow-Me Scan), SCAN GRP (Group Scan), SCAN OFF
DW	Engages/Disengages Dual Watch.	DW ON, DW OFF
AF	Sets the minimum Audio Volume level.	AF 000 ~ AF 255
VOX	Sets the VOX sensitivity. This Set Mode Item is appeared on the VOX function enabled channel only.	–8 ~ 0 ~ +8
TX Save	Enables/Disables the TX Save function.	TXSV ON, TXSV OFF
Encryption	Enables/Disables the Encryption (for analog) or Privacy (for digital) function. This Set Mode Item is appeared on the Encryption/Privacy function enabled channel only.	ENCR ON, ENCR OFF

Optional Accessories

FNB-V133LI-UNI	7.4V, 1380 mAh Li-Ion Battery Pack
FNB-V134LI-UNI	7.4V, 2300 mAh Li-Ion Battery Pack
CD-58	Desktop Charger
PA-55	AC Adapter for CD-58
VAC-6058	Multi-Unit Charger
MH-360S	Compact Speaker Microphone
MH-450S	Speaker Microphone
MH-66A4B	Submersible Speaker Microphone
MH-81A4B	Over-the-head VOX Compatible Headset
ATV-16A	VHF Antenna (136-150 MHz)
ATV-16B	VHF Antenna (150-162 MHz)
ATV-16C	VHF Antenna (162-174 MHz)
ATV-16XL	VHF Antenna (Untuned)
ATU-16B	UHF Antenna (400-420 MHz)
ATU-16C	UHF Antenna (420-450 MHz)
ATU-16D	UHF Antenna (450-470 MHz)
ATU-16F	UHF Antenna (470-520 MHz)
ATU-16BS	UHF Stubby Antenna (400-430 MHz)
ATU-16DS	UHF Stubby Antenna (450-490 MHz)
CN-2A	Antenna Adapter
CLIP-20	Belt Clip
CE142	PC Programming Software
FIF-12	USB Programming Interface
CT-106	Connection Cable for FIF-12
FRB-6	Tuning Interface Box
CT-160	Connection Cable for FRB-6
CT-27	Radio to Radio Cloning Cable

Availability of accessories may vary; some accessories are supplied standard per local requirements, others may be unavailable in some regions. Check with your Vertex Standard Dealer for changes to this list.

Warranty Policy

Vertex Standard warrants, to the original purchaser only, its Vertex Standard manufactured communications products against defects in materials and workmanship under normal use and service for a given period of time from the date of purchase.

Limited Warranty Details:

- North America customers (USA and Canada): http://www.vertexstandard.com/lmr/warranty-terms.aspx
- Customers outside of North America: contact the authorized dealer in your country.

The AMBE+2TM voice coding Technology embodied in this product is protected by intellectual property rights including patent rights, copyrights and trade secrets of Digital Voice Systems, Inc. This voice coding Technology is licensed solely for use within this Communications Equipment. The user of this Technology is explicitly prohibited from attempting to decompile, reverse engineer, or disassemble the Object Code, or in any other way convert the Object Code into a human-readable form.

U.S. Pat. Nos. #5,870,405, #5,826,222, #5,754,974, #5,701,390, #5,715,365, #5,649,050, #5,630,011, #5,581,656, #5,517,511, #5,491,772, #5,247,579, #5,226,084 and #5,195,166.

Part 15.21: Changes or modifications to this device not expressly approved by Vertex Standard could void the user's authorization to operate this device.

Vertex Standard

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